

What is claimed is

1. A method for detecting and/or quantifying *Fusobacterium nucleatum* by a PCR method employing the following primers (1) and (2):

(1) a forward primer, comprising a nucleotide sequence which is depicted as a portion of SEQ ID No.1 and has at least ten nucleotides in length;

(2) a reverse primer, comprising a nucleotide sequence which is depicted as a portion of a sequence complementary to SEQ ID No.2 and has at least ten nucleotides in length.

2. A primer set for detecting and/or quantifying *Fusobacterium nucleatum* by a PCR method comprising the following primers (A) and (B):

(A) a primer, comprising a nucleotide sequence which is depicted as a portion or a whole of a region between nucleotides 1 to 39 of SEQ ID No.3 and has at least ten nucleotides in length;

(B) a primer, comprising a nucleotide sequence which is depicted as a portion or a whole of a sequence complementary to a region between nucleotides 863 to 883 of SEQ ID No.3 and has at least ten nucleotides in length.

3. A primer set for detecting and/or quantifying

Fusobacterium nucleatum by a PCR method comprising the following primers (C) and (B):

(C) a primer, consisting of a nucleotide sequence which is depicted as a region between nucleotides 1 to 18 of SEQ ID No.3;

(B) a primer, comprising a nucleotide sequence which is depicted as a portion or a whole of a sequence complementary to a region between nucleotides 863 to 883 of SEQ ID No.3 and has at least ten nucleotides in length.

4. A gene amplification product specific for *Fusobacterium nucleatum* obtained by conducting a PCR method using a primer set comprising either the following primers (A) and (B) or the following primers (B) and (C) together with a ribosomal DNA of *Fusobacterium nucleatum* as a template:

(A) a primer, comprising a nucleotide sequence which is depicted as a portion or a whole of a region between nucleotides 1 to 39 of SEQ ID No.3 and has at least ten nucleotides in length;

(B) a primer, comprising a nucleotide sequence which is depicted as a portion or a whole of a sequence complementary to a region between nucleotides 863 to 883 of SEQ ID No.3 and has at least ten nucleotides in length;

(C) a primer, consisting of a nucleotide sequence which is depicted as a region between nucleotides 1 to 18 of SEQ

ID No.3.

5. The gene amplification product according to claim 4 wherein the gene amplification product is a probe labeled with a labeling substance.

6. The gene amplification product according to claim 5, wherein the labeling substance is at least one selected from the group consisting of biotin, digoxigenin, FITC, acridine, dinitrophenyl, luciferase, alkaline phosphatase and [³²P]dNTP.

7. A method for detecting and/or quantifying *Fusobacterium nucleatum* comprising:

a first step of conducting a PCR method using primers containing the following primers (A) and (B),

(A) a primer, comprising a nucleotide sequence which is depicted as a portion or a whole of a region between nucleotides 1 to 39 of SEQ ID No.3 and has at least ten nucleotides in length;

(B) a primer, comprising a nucleotide sequence which is depicted as a portion or a whole of a sequence complementary to a region between nucleotides 863 to 883 of SEQ ID No.3 and has at least ten nucleotides in length; and,

a second step of conducting a PCR method using primers

containing the primer (A) and the following primer (D) or (E) together with an amplification product obtained in the first step as a template,

(D) a primer, comprising a nucleotide sequence which is depicted as a portion or a whole of a sequence complementary to a region between nucleotides 124 to 156 of SEQ ID No.3 and has at least ten nucleotides in length;

(E) a primer, consisting of a nucleotide sequence which is depicted as a sequence complementary to a region between nucleotides 124 to 143 of SEQ ID No.3.

8. A method for detecting and/or quantifying *Fusobacterium nucleatum* comprising:

a first step of conducting a PCR method using primers containing the following primers (F) and (B),

(F) a primer, comprising a nucleotide sequence which is depicted as a portion of SEQ ID No. 4 and has at least ten nucleotides in length,

(B) a primer, comprising a nucleotide sequence which is depicted as a portion or a whole of a sequence complementary to a region between nucleotides 863 to 883 of SEQ ID No.3 and has at least ten nucleotides in length; and,

a second step of conducting a PCR method using primers containing the following primers (A) and (D) together with an amplification product obtained in the first step as a

template.

(A) a primer, comprising a nucleotide sequence which is depicted as a portion or a whole of a region between nucleotides 1 to 39 of SEQ ID No.3 and has at least ten nucleotides in length,

(D) a primer, comprising a nucleotide sequence which is depicted as a portion or a whole of a sequence complementary to a region between nucleotides 124 to 156 of SEQ ID No.3 and has at least ten nucleotides in length.

9. A gene amplification product specific for *Fusobacterium nucleatum* obtained by conducting a PCR method using the following primer (A) and the following primer (D) or (E) together with a DNA containing a nucleotide sequence of SEQ ID No. 5 as a template.

(A) a primer, comprising a nucleotide sequence which is depicted as a portion or a whole of a region between nucleotides 1 to 39 of SEQ ID No.3 and has at least ten nucleotides in length;

(D) a primer, comprising a nucleotide sequence which is depicted as a portion or a whole of a sequence complementary to a region between nucleotides 124 to 156 of SEQ ID No.3 and has at least ten nucleotides in length;

(E) a primer, consisting of a nucleotide sequence which is depicted as a sequence complementary to a region between

nucleotides 124 to 143 of SEQ ID No.3.

10. A probe having a nucleotide sequence depicted as SEQ ID No. 5.